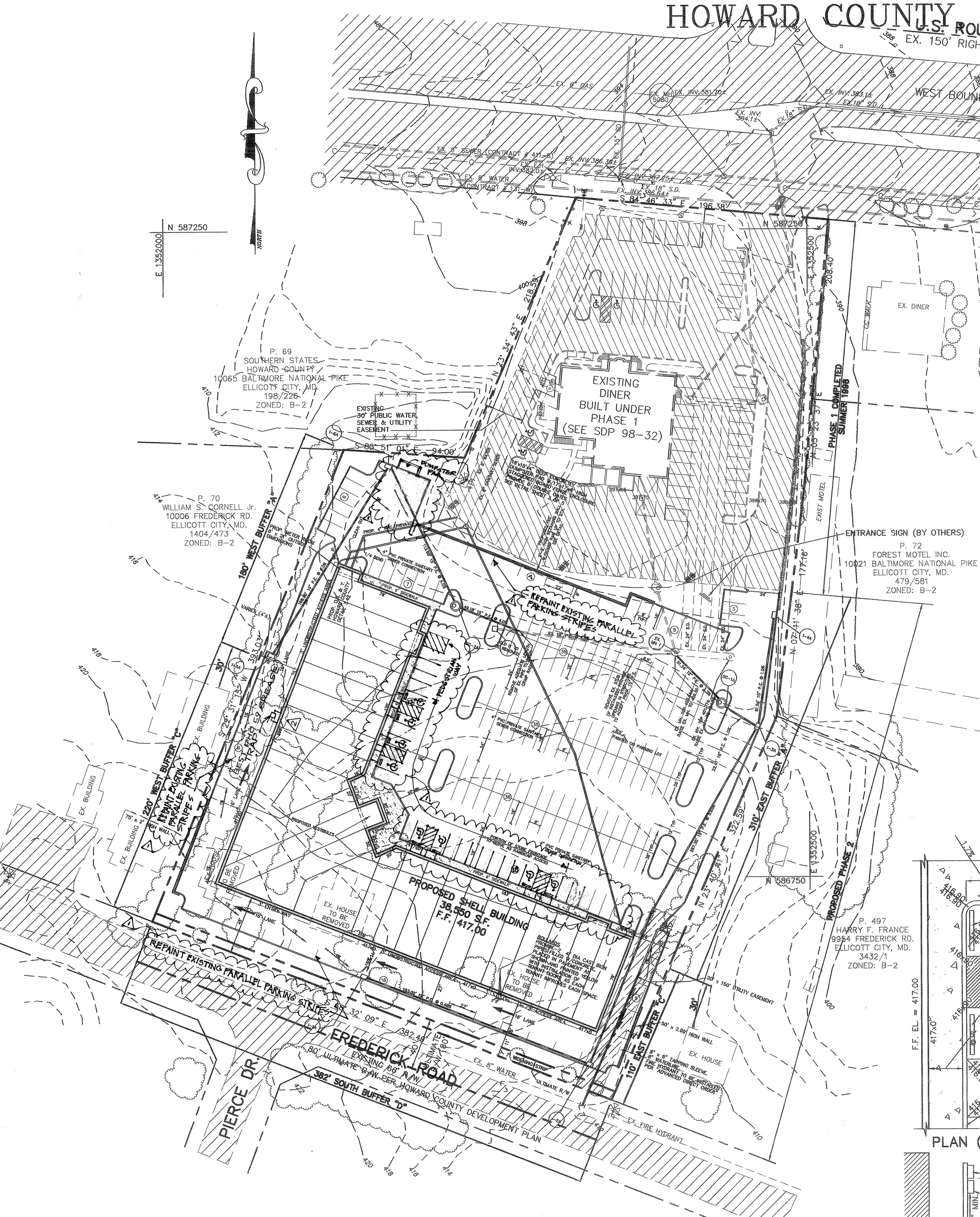
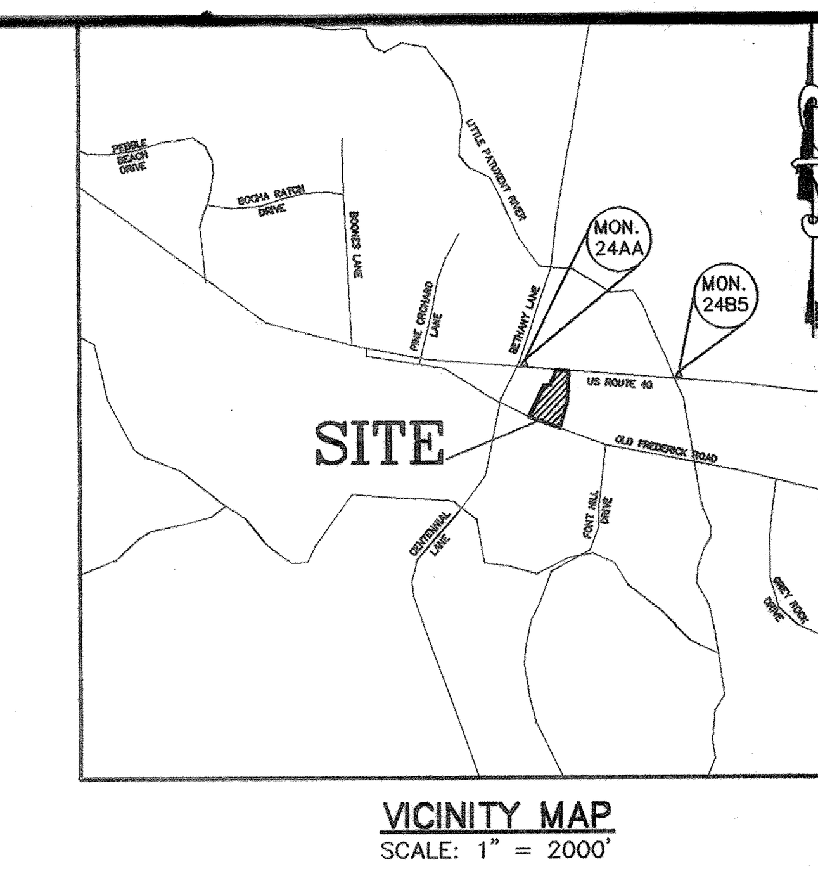
STAVLAS - ROUTE 40 BUSINESS CENTER
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND



GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, BUREAU OF ENGINEERING, AND CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
4. TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTED). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
5. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH TWO FOOT CONTOUR INTERVALS PREPARED BY DESIGN TECH. INC., DATED JULY 1997.
6. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 24AA AND 24B5 WERE USED FOR THIS PROJECT.
7. WATER IS PUBLIC. STATE CONTRACT NO. 131-W.
8. SEWER IS PUBLIC. STATE CONTRACT NO. 411-S.
9. STORMWATER MANAGEMENT CONTROL IS TO BE PROVIDED BY PRIVATE UNDERGROUND STORAGE PIPES (CONSTRUCTED UNDER PHASE 1 WITH STORAGE FOR BOTH PHASE 1 AND PHASE 2) WITH STORMCEPTORS (PROPOSED ON THIS PLAN) AND WILL BE MAINTAINED BY OWNER OF PROPERTY.
10. THERE IS NO FLOODPLAIN ON SITE.
11. THERE ARE NO WETLANDS ON THIS SITE.
12. NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.
13. ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
14. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
15. THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALLS.
16. PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
17. NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT TO SUBGRADE.
18. ALL STORM DRAIN PIPE BEDDING SHALL BE AS SHOWN IN DETAIL G2.01 (TRENCH IN ROCK OR TRENCH IN EARTH AS DETERMINED BY FIELD CONDITIONS) IN VOL IV. OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR AS SHOWN ON THE DRAWINGS.
19. THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL PRACTICES, STORM WATER MANAGEMENT PRACTICES AND THE DISCHARGE OF STORM WATER ONTO OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES INCLUDED IN THIS PLAN. HE IS ALSO RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS-OF-WAY AND/OR WORK ON ADJACENT PROPERTIES INCLUDED IN THIS PLAN.
20. THE OWNER SHALL PROVIDE A SEPARATE AND INDEPENDENT SEWER CONNECTION FOR EACH TENANT OR OCCUPANT OF ANY BUILDING, SHOWN ON THIS SITE DEVELOPMENT PLAN, WHO WILL DISCHARGE NON-DOMESTIC WASTE TO THE PUBLIC SEWERAGE SYSTEM. IF THIS WASTE IS REGULATED UNDER SECTION 18.122A OF THE HOWARD COUNTY CODE. EACH SEPARATE AND INDEPENDENT SEWER CONNECTION SHALL INCLUDE A STANDARD MANHOLE AND OTHER WATER PRETREATMENT DEVICES AS REQUIRED AND APPROVED BY HOWARD COUNTY. WASTE LINES ON THE INTERIOR OF THE BUILDING SHALL BE DESIGNED, CONSTRUCTED OR MODIFIED SUCH THAT NON-DOMESTIC WASTE WILL BE DISCHARGED TO THE SEPARATE AND INDEPENDENT SEWER CONNECTION. NO PLAN SHALL DISCHARGE REGULATED NON-DOMESTIC WATER TO PUBLIC SEWERAGE SYSTEM PRIOR TO INSTALLATION OF THE SEPARATE AND INDEPENDENT SEWER CONNECTION AND RELATED INTERIOR WASTE LINES. THE ABOVE REQUIREMENTS SHALL APPLY TO ALL INITIAL AND FUTURE OCCUPANTS OR TENANTS.
21. ALL IMPROVEMENTS AS SHOWN ON THESE PLANS WITHIN THE R/W OF U.S. ROUTE 40 WILL BE THE RESPONSIBILITY OF THE DEVELOPER.
22. ALL EXTERIOR LIGHTING SHALL CONFORM TO SECTION 134 - OUTDOOR LIGHTING, ZONING REGULATIONS.
23. NO UNDERGROUND/GROUNDWATER TESTING CONDUCTED FOR THE PRESENCE OF CONTAMINANTS BY GAMMA ENGINEERING AT THIS TIME.



VICINITY MAP
SCALE: 1" = 2000'

LANDSCAPING NOTES

1. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL
2. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF $
3. THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES, AND WALLS. ALL PLANT MATERIALS IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
4. PHASE 1 WAS APPROVED AS SITE DEVELOPMENT PLAN - (SDP 98-32)

PHASE II PERIMETER LANDSCAPE EDGE SCHEDULE

CATEGORY	ADJACENT TO FREDERICK RD.	ADJACENT TO PERIMETER PROPERTIES				ADJACENT TO PHASE I
	SOUTH	WEST		EAST		NORTH
LANDSCAPE TYPE	D	C	A	C	A	NONE REQUIRED
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	382'	220'	180'	110'	310'	
CREDIT FOR EXISTING VEGETATION	YES - 3 EX. TREES TO SUBSTITUTE FOR 3 EVERGREEN TREES	NO	NO	NO	NO	
CREDIT FOR WALL, FENCE, OR BERM	NO	NO	NO	NO	NO	
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	382/60 = 7 382/10 = 39 0	220/40 = 6 180/20 = 9 0	180/60 = 5 0 0	110/40 = 3 110/20 = 6 0	310/60 = 5 0 0	
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUB.) SHRUBS (10:1 SUB.)	7 33 (11 CLUSTERS OF 3 3(EXISTING) 50 (= 5 EVERGREEN TREES)	6 9 (3 CLUSTERS OF 3) 0 0	5 0 0 0	3 6 (2 CLUSTERS OF 3) 0 20	5 0 0 0	

SITE TABULATION

AREA OF PARCEL	5.006 AC.
AREA OF EX-PHASE 1 SUBMISSION	2.39 AC.
AREA OF PHASE 2 SUBMISSION	2.616 AC.
EXISTING PHASE 1 USE:	6,544 SQ. FT. RESTAURANT
NUMBER OF PARKING SPACES REQUIRED PHASE 1	92 SPACES (INCLUDES 4 HANDICAP) (14 SPACES PER 1,000 S.F.)

PROPOSED PHASE II: SHOPPING CENTER 38,550 SQ. FT. TOTAL (MIXED USES)

PROPOSED USE	PARKING REQUIREMENT RATE	PROPOSED SQ. FT.	REQUIRED PARKING SPACES
MEDICAL OFFICE	1/200	4800	24
GENERAL OFFICE	1/303	4000	13
RETAIL	1/200	29,750	149
TOTAL	5/1000	38,550	193

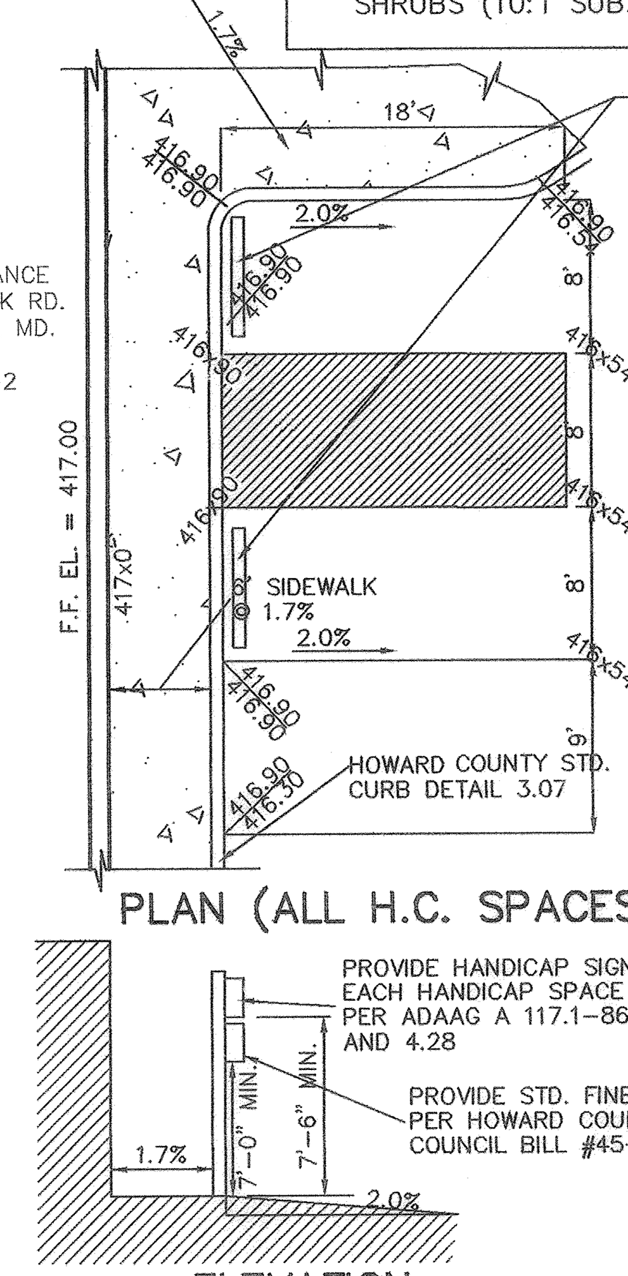
NUMBER OF PARKING SPACES PROVIDED PHASE 1	86 SPACES (INCLUDES 4 HANDICAP) (14 SPACES PER 1,000 S.F.)
NUMBER OF PARKING SPACES REQUIRED PHASE 2	193 SPACES
NUMBER OF PARKING SPACES PROVIDED PHASE 2	206 SPACES (INCLUDES 8 HANDICAP SPACES)
TOTAL NUMBER OF PARKING SPACES REQUIRED (PHASE 1 & PHASE 2)	285 SPACES
TOTAL NUMBER OF PARKING SPACES PROVIDED (PHASE 1 & PHASE 2)	292 SPACES

PLANTING SCHEDULE

ABBREVIATION	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	SPACING	COST	INSTALLED	REMARKS
QR	QUERCUS	RED	36	2 1/2" - 3"		$	$	
	RUBRA	OAK		CAL., 8'-10' TALL				
JC	JUNIPERUS CHINEHSIS	GREEN SERGEANT	35	18" - 24"	4' O.C.	$	$	
	SARGENTI JUNIPER	JUNIPER		SP. MIN. 36" TALL				
PS	PINUS	WHITE	48	6' - 8'	10' O.C.	$	$	PROVIDE MINIMUM 10' SPACING
	STROBUS	PINE		HIGH				
IC	ILEX CRENATA	JAPANESE	35	MIN. 2 1/2' - 3'		$	$	
	COMPACTA	HOLLY		HIGH				
		TOTAL PLANTS	154			TOTAL PRICE	$	

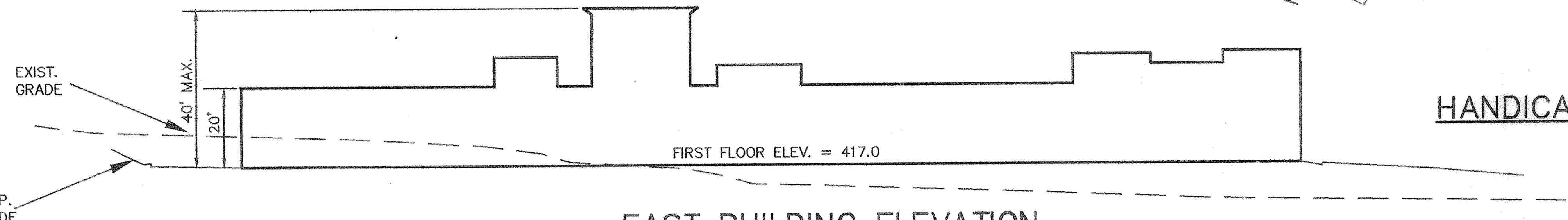
PHASE II INTERNAL LANDSCAPE SCHEDULE

FEATURE	214 SPACES REQUIRED	PROVIDE
ISLANDS 1/20 SPACES	10	10 ISLANDS @ 200 SQ. FT.
SHADE TREES 1/20 SPACES	10	= 10 TREES PROVIDED



HANDICAP PARKING SPACE & SIGN DETAIL
SCALE: 1" = 10'

ARCHITECT 3857 ISAO OISHI STATE OF MARYLAND
5/25/16



EAST BUILDING ELEVATION
SCALE: 1" = 30'

ADDRESS CHART

BUILDING	STREET ADDRESS
	10055 BALTIMORE NATIONAL PIKE

SUBDIVISION NAME-				SECT./AREA-	PARCEL- 68
DEED- 4075/612	BLOCK # -	ZONING- B-2	TAX MAP NO.- 24	ELECT. DIST.- 2nd	CENSUS TRACT-
WATER CODE-			SEWER CODE-		

SHEET INDEX

NO.	DESCRIPTION
1	SITE DEVELOPMENT PLAN, NOTES AND DETAILS
2	SITE DEVELOPMENT & LANDSCAPE PLAN
3	STORM DRAIN PROFILES AND DETAILS
4	GRADING, SEDIMENT AND EROSION CONTROL
5	SOILS AND DRAINAGE AREA MAP

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

Cheryl Simmons 4/26/99
USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT

John R. Robertson 4/26/99
HOWARD SCD DATE

DEVELOPER'S/BUILDERS CERTIFICATE

WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. WE FURTHER CERTIFY THAT UPON COMPLETION A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Michael Stavlas 4/5/99
MICHAEL STAVLAS - OWNER DATE

Michael Helfrich 4/5/99
MICHAEL H. HELFRICH MD. REGISTRATION NO. 15542 DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

Mary Sue Baker per [illegible] 5/7/99
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

[signature] 5/19/99
DIRECTOR DATE

Richard Blood 5/7/99
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[signature] 4/28/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DATE	NO.	REVISION
2/4/21	2	BEST PHO 59 4" SAN. PIPE WILL GO THRU GREASE TRAP OUTSIDE AND BACK TO BLDG. SAN. PIPE
5/25/16	1	REVISED PARKING LOT CONFIGURATION & TABULATIONS

OWNER / DEVELOPER
MICHAEL STAVLAS
1726 DORSEY ROAD
HANOVER, MD. 21076

PROJECT S.D.P. 99-56
STAVLAS - ROUTE 40 STAVLAS BUSINESS CENTER
PHASE II

AREA TAX MAP 24 PARCEL 68
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
SITE DEVELOPMENT PLAN-COVER SHEET SHOWING ENTIRE SITE (EXISTING PHASE I AND PROPOSED PHASE II)

GAMMA ENGINEERING
844 WEST STREET
ANNAPOLIS, MD 21401
(410) 626-1070

3/21/99
DATE

STATE OF MARYLAND MICHAEL H. HELFRICH NO. 15542 PROFESSIONAL ENGINEER
MICHAEL H. HELFRICH

DESIGNED BY: MHH	
DRAWN BY: APF	
PROJECT NO. SDP 99-56	
DATE: MAR 1999	
SCALE: 1" = 50'	
DRAWING NO. 1 OF 5	

* STORM CEPTOR AS-BUILTS - see Sheets 2 & 3 of 5

SDP-99-56

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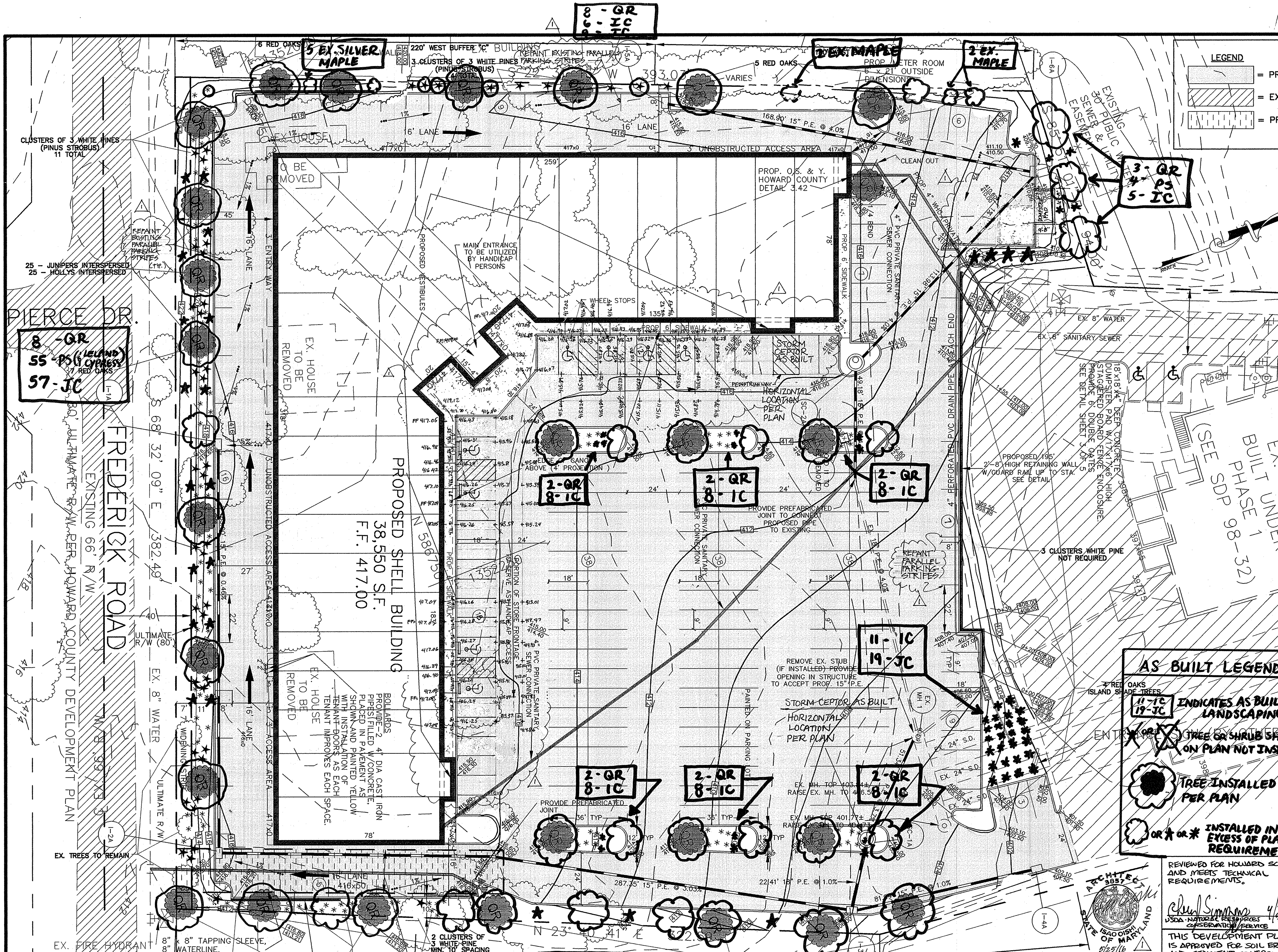


LANDSCAPE
AS BUILT CERTIFICATE

Michael H. Helfrich 3/20/02
MICHAEL H. HELFRICH DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

Cheryl Simmons 4/26/99
USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Robertson 4/26/99
HOWARD SCD DATE

BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AND "AS - BUILT" PLAN OF THE PROJECT WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Michael Stavlas 4/5/99
DEVELOPER DATE

BY THE ENGINEER:

I CERTIFY THAT THIS PLAN FOR ~~POND CONSTRUCTION,~~ EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. ~~I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS - BUILT" PLAN OF THE PROJECT WITHIN 30 DAYS OF COMPLETION.~~

STATE OF MARYLAND · MICHAEL H. HELFRICH · NO. 15542 · REGISTERED PROFESSIONAL ENGINEER

4/26/98
ENGINEER DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

Mary Sue Baker per 5/7/99
COUNTY HEALTH OFFICER MR DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

5/10/99
DIRECTOR DATE

Richard Blood 5/7/99
CHIEF, DIVISION LAND DEVELOPMENT DATE

4/28/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DATE	NO.	REVISION
5/25/16	1	REVISE PARKING CONFIGURATION

OWNER / DEVELOPER
MICHAEL STAVLAS
1726 DORSEY ROAD
HANOVER, MD. 21076

PROJECT S.D.P. 99-56
STAVLAS - ROUTE 40 STAVLAS BUSINESS CENTER
PHASE II

AREA TAX MAP 24 PARCEL 68
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE SITE DEVELOPMENT PLAN AND LANDSCAPE PLAN

GAMMA ENGINEERING
844 WEST STREET
ANNAPOLIS, MD 21401
(410) 626-1070

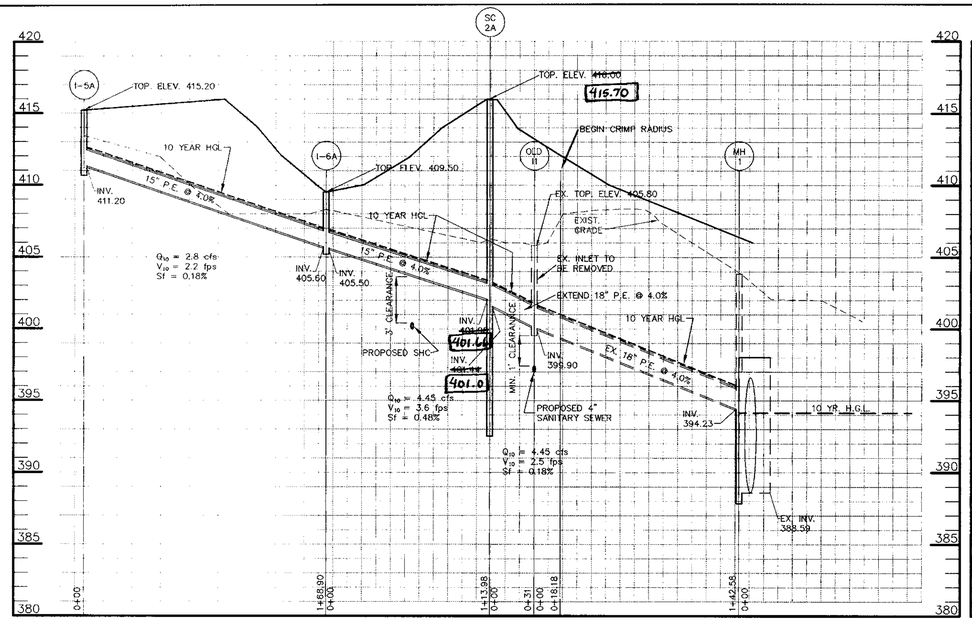
3/23/99
DATE

STATE OF MARYLAND · MICHAEL H. HELFRICH · NO. 15542 · REGISTERED PROFESSIONAL ENGINEER

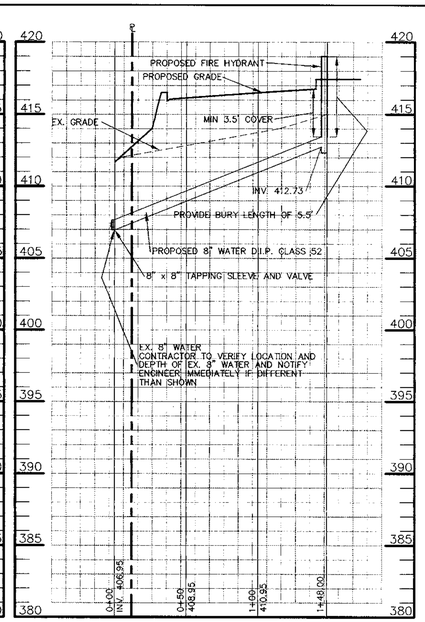
MICHAEL H. HELFRICH

DESIGNED BY: MHH
DRAWN BY: APF
PROJECT NO. SDP 99-56
DATE: MAR 1999
SCALE: 1" = 20'
DRAWING NO. 2 OF 5

STORM CEPTOR AS-BUILTS SDP-99-56



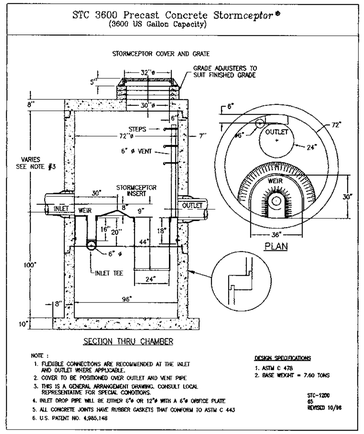
STORMDRAIN PROFILE
SCALE: HOR: 1" = 50'
VER: 1" = 5'



PUBLIC WATERLINE PROFILE
TO BE INSTALLED UNDER "ADD"
SCALE: HOR: 1" = 50'
VER: 1" = 5'

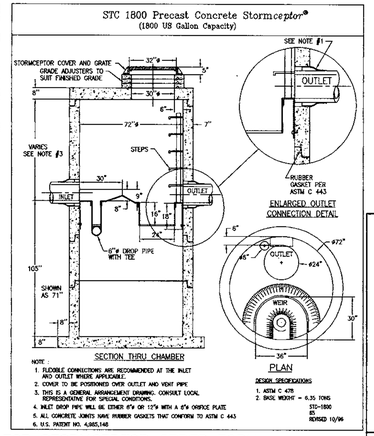
SC - 2A

STC 3600 Precast Concrete Stormceptor®
(3600 US Gallon Capacity)

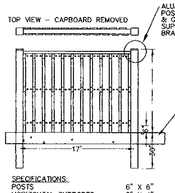


SC - 1A

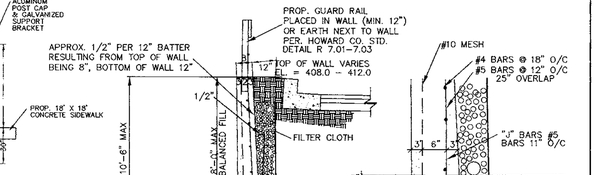
STC 1800 Precast Concrete Stormceptor®
(1800 US Gallon Capacity)



NOTE: SEE SHEET 5 OF 5 FOR STORMCEPTOR ORDER FORM



DUMPSTER ENCLOSURE DETAIL
NOT TO SCALE



FOOTING DETAIL
SCALE: NONE

RETAINING WALL DETAIL
SCALE: NONE

"J" BAR DETAIL
SCALE: NONE

NOTES:
1. CONSTRUCTION SUPERVISION - CONSTRUCTION OF THIS WALL SHALL BE PERFORMED UNDER THE SUPERVISION OF A MARYLAND REGISTERED PROFESSIONAL ENGINEER.
2. WALL STRUCTURAL BACKFILL - BACKFILL MATERIAL SHALL BE SANDY SILT NATIVE TO THE SITE. THE FILL SHALL BE PLACED IN HORIZONTAL LAYERS OF 8"-12" AND COMPACTED TO 95% DENSITY AT APPROXIMATELY 10% MOISTURE CONTENT, COMPACTED BY HAND TAMPERS OR OTHER COMPACTION EQUIPMENT. THE MATERIAL NEEDS TO FILL COMPLETELY ALL SPACES UNDER AND ADJACENT TO THE WALL. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF THE STRUCTURE.

OPERATION & MAINTENANCE SCHEDULE FOR STORMCEPTOR WATER QUALITY DEVICE

1. THE STORMCEPTOR WATER QUALITY STRUCTURE SHALL BE PERIODICALLY INSPECTED AND CLEANED TO MAINTAIN OPERATION AND FUNCTION. THE OWNER SHALL INSPECT THE STORMCEPTOR UNIT YEARLY AT A MINIMUM, UTILIZING THE STORMCEPTOR INSPECTION/MONITORING FORM. INSPECTIONS SHALL BE DONE BY USING A CLEAR PLEXIGLASS TUBE ("SLUDGE JUDGE") TO EXTRACT A WATER COLUMN SAMPLE. WHEN THE SEDIMENT DEPTHS EXCEED THE LEVEL SPECIFIED IN TABLE 6 OF THE STORMCEPTOR TECHNICAL MANUAL, THE UNIT MUST BE CLEANED.
2. THE STORMCEPTOR WATER QUALITY STRUCTURE SHALL BE CHECKED AND CLEANED IMMEDIATELY AFTER PETROLEUM SPILLS. THE OWNER SHALL CONTACT THE APPROPRIATE REGULATORY AGENCIES.
3. THE MAINTENANCE OF THE STORMCEPTOR UNIT SHALL BE DONE USING A VACCUUM TRUCK WHICH WILL REMOVE THE WATER, SEDIMENT, DEBRIS, FLOATING HYDROCARBONS, AND OTHER MATERIALS IN THE UNIT. PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIALS AND LIQUID MUST BE FOLLOWED BY THE OWNER.
4. THE INLET AND OUTLET PIPES SHALL BE CHECKED FOR ANY OBSTRUCTIONS AT LEAST ONCE EVERY SIX MONTHS. IF OBSTRUCTIONS ARE FOUND THE OWNER SHALL HAVE THEM REMOVED. STRUCTURAL PARTS OF THE STORMCEPTOR UNIT SHALL BE REPAIRED AS NEEDED.
5. THE OWNER SHALL RETAIN AND MAKE THE STORMCEPTOR INSPECTION/MONITORING FORMS AVAILABLE TO THE HOWARD COUNTY OFFICIALS UPON THEIR REQUEST.

BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AND "AS - BUILT" PLAN OF THE PROJECT WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Michael Stavlas 4/5/99
DEVELOPER DATE

BY THE ENGINEER:

I CERTIFY THAT THIS PLAN FOR ~~POND CONSTRUCTION~~ EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. ~~I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS - BUILT" PLAN OF THE PROJECT WITHIN 30 DAYS OF COMPLETION.~~

Michael Helfrich 4/6/99
ENGINEER DATE

STATE OF MARYLAND MICHAEL HOWARD HELFRICH No. 21401 REGISTERED PROFESSIONAL ENGINEER

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

Mary Sue Baker per SM 5/7/99
COUNTY HEALTH OFFICER MRI DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

5/7/99
DIRECTOR DATE

5/7/99
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

4/27/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.

DIRECTOR DATE

CHIEF, BUREAU OF ENGINEERING DATE

DATE	NO.	REVISION

OWNER / DEVELOPER

MICHAEL STAVLAS
1726 DORSEY ROAD
HANOVER, MD. 21076

PROJECT: S.D.P. 99-56
STAVLAS - ROUTE 40 STAVLAS BUSINESS CENTER PHASE II

AREA: TAX MAP 24 PARCEL 68
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: NOTES, DETAILS, WATERLINE AND STORM DRAIN PROFILES

GAMMA ENGINEERING
844 WEST STREET
ANNAPOLIS, MD 21401
(410) 626-1070

3/21/99
DATE

STATE OF MARYLAND MICHAEL HOWARD HELFRICH No. 21401 REGISTERED PROFESSIONAL ENGINEER

Michael H. Helfrich
MICHAEL H. HELFRICH

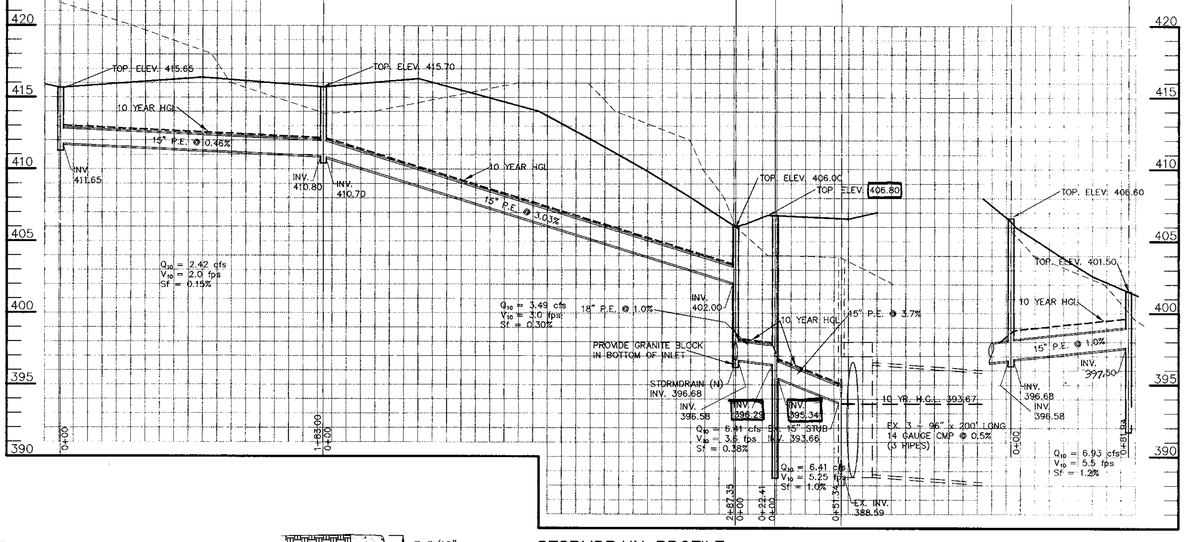
DESIGNED BY: MHH	
DRAWN BY: APF	
PROJECT NO. SDP 99-56	
DATE: JAN 1999	
SCALE: AS NOTED	
DRAWING NO. 3 OF 5	

STRUCTURE SCHEDULE

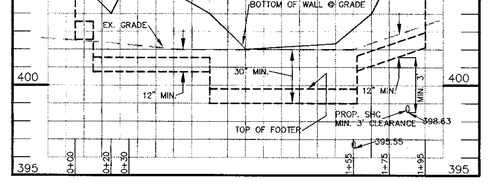
NO.	TYPE	TOP	INV. IN	INV. OUT	REMARKS
I-1A	PRECAST "WR"	415.65	----	411.65	SD 4.38
I-2A	PRECAST "WR"	415.70	410.80	410.70	SD 4.38
I-3A	PRECAST "WR"	406.00	396.68	396.58	SD 4.38
I-4A	PRECAST "WR"	401.50	----	397.50	SD 4.38
I-5A	PRECAST "WR"	409.50	405.60	405.50	SD 4.38
I-6A	PRECAST "WR"	401.50	----	397.50	SD 4.38
SC 1	STC 1200	407.19	395.83	395.75	SEE DETAIL THIS SHEET
SC 2	STC 3600	416.0	401.78	401.68	SEE DETAIL THIS SHEET

PIPE SCHEDULE

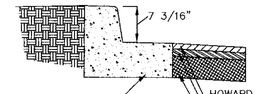
SIZE	MATERIAL	LENGTH
15"	P.E.	886.51'
18"	P.E.	71.59'



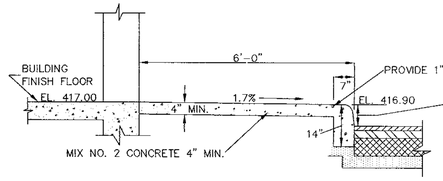
STORMDRAIN PROFILE
SCALE: HOR: 1" = 50'
VER: 1" = 5'



WALL PROFILE
SCALE: VERT: 1" = 4'
HOR: 1" = 40'



PAVEMENT SECTION AND CURB DETAIL
HOWARD COUNTY STD DETAIL R.2.01 PAVEMENT TYPE "P-2"
SCALE : NOT TO SCALE



COMBINATION SIDEWALK AND CURB DETAIL
HOWARD COUNTY STD DETAIL R 3.07
SCALE : 1" = 3'

DESIGN SUMMARY

	PIPE STORAGE	STORMCEPTOR 1A	STORMCEPTOR 2A
FACILITY IDENTIFICATION:	PS1	SC1A	SC2A
FACILITY TYPE:	UNDERGROUND PIPES	"STORMCEPTOR"	"STORMCEPTOR"
INVERT ELEVATION:	387.5		
WATER SURFACE ELEVATION 2yr/10yr/100yr	391.17/393.67/402.3		
STORAGE VOLUME:	30,156 cu.ft. 0.70 ac.ft.		
INFLOW 2yr/10yr/100yr	16.8/29.6/42.0		
REQUIRED CONTROL 2yr/10yr/100yr	7.0/16.8/NONE	NONE	NONE
OUTFLOW 2yr/10yr/100yr	6.0/8.1/12.9		
MAINTENANCE RESPONSIBILITY:	PRIVATE	PRIVATE	PRIVATE

AS BUILT CERTIFICATE

MICHAEL H. HELFRICH DATE

SDP-99-56

STORM CEPTOR AS-BUILTS

C:\Program Files\AutoCAD R14\SAMPLE\PROJECTS\PRINCESS\PHASE II\SHEET3A.dwg Thu Mar 25 11:40:40 1999

DETAILS & SPECIFICATIONS VEGETATIVE ESTABLISHMENT

FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN SEVEN CALENDAR DAYS FOR THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND FOURTEEN DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

1. PERMANENT SEEDING:

A. SOIL TESTS: LIME AND FERTILIZER WILL BE APPLIED PER SOIL TESTS RESULTS FOR SITES GREATER THAN 5 ACRES. SOIL TESTS WILL BE DONE AT COMPLETION OF ROUGH GRADING. RATES AND ANALYSES WILL BE PROVIDED TO THE GRADING INSPECTOR AS WELL AS THE CONTRACTOR.

1. OCCURRENCE OF ACID SULFATE SOILS (GRAYISH BLACK COLOR) WILL REQUIRE COVERING WITH A MINIMUM OF 12 INCHES OF CLEAN SOIL WITH 6 INCHES MINIMUM CAPPING OF TOP SOIL. NO STOCKPILING OF MATERIAL IS ALLOWED. IF NEEDED, SOIL TESTS SHOULD BE DONE BEFORE AND AFTER A 6 WEEK INCUBATION PERIOD TO ALLOW OXIDATION OF SULFATES.

B. SEEDBED PREPARATION: AREA TO BE SEEDED SHALL BE LOOSE AND FRIABLE TO A DEPTH OF AT LEAST 3 INCHES. THE TOP LAYER SHALL BE LOOSENED BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING OCCURS. FOR SITES LESS THAN 5 ACRES, APPLY 100 POUNDS OF DOLOMITIC LIMESTONE AND 21 POUNDS OF 10-20-20 FERTILIZER PER 1,000 SQUARE FEET. HARROW OR DISK LIME AND FERTILIZER INTO THE SOIL TO A DEPTH OF AT LEAST 3 INCHES ON SLOPES FLATTER THAN 3:1.

C. SEEDING: APPLY 5-6 POUNDS PER 1,000 SQUARE FEET OF TALL FESQUE BETWEEN FEBRUARY 1 AND APRIL 30 OR BETWEEN AUGUST 15 AND OCTOBER 31. APPLY SEED UNIFORMLY ON A MOIST FIRM SEEDBED WITH A CYCLONE SEEDED DRILL, CULTIPACKER SEEDER OR HYDROSEEDER (SLURRY INCLUDES SEEDS AND FERTILIZER, RECOMMENDED ON STEEP SLOPES ONLY). MAXIMUM SEED DEPTH SHOULD BE 1/4 INCH IN CLAYEY SOILS AND 1/2 INCH IN SANDY SOILS WHEN USING OTHER THAN THE HYDROSEEDER METHOD. IRRIGATE IF SOIL MOISTURE IS DEFICIENT TO SUPPORT ADEQUATE GROWTH UNTIL VEGETATION IS FIRMLY ESTABLISHED. IF OTHER SEED MIXES ARE TO BE USED, SELECT FROM TABLE 25, ENTITLED "PERMANENT SEEDING FOR LOW MAINTENANCE AREAS" FROM THE 1994 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. MIXES SUITABLE FOR THIS AREA ARE 1,3 AND 5-7. MIXES 5-7 ARE SUITABLE IN NON-MOWABLE SITUATIONS.

D. MULCHING: MULCH SHALL BE APPLIED TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING DURING THE TIME PERIODS WHEN SEEDING IS NOT PERMITTED, MULCH SHALL BE APPLIED IMMEDIATELY AFTER GRADING.

MULCH SHALL BE UNROTTED, UNCHOPPED, SMALL GRAIN STRAW APPLIED AT A RATE OF 2 TONS PER ACRE OR 90 POUNDS PER 1,000 SQUARE FEET (2 BALES). IF A MULCH ANCHORING TOOL IS USED, APPLY 2.5 TONS PER ACRE. MULCH MATERIALS SHALL BE RELATIVELY FREE OF ALL KINDS OF WEEDS AND SHALL BE FREE OF PROHIBITED NOXIOUS WEEDS. SPREAD MULCH UNIFORMLY, MECHANICALLY OR BY HAND, TO A DEPTH OF 1-2 INCHES

E. SECURING STRAW MULCH: STRAW MULCH SHALL BE SECURED IMMEDIATELY FOLLOWING MULCH APPLICATION TO MINIMIZE MOVEMENT BY THE WIND OR THE WATER. THE FOLLOWING METHODS ARE PERMITTED:

(I) USE A MULCH ANCHORING TOOL WHICH IS DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE TO A MINIMUM DEPTH OF 2 INCHES. THIS IS THE MOST EFFECTIVE METHOD FOR SECURING MULCH, HOWEVER, IT IS LIMITED TO RELATIVELY FLAT AREAS WHERE EQUIPMENT CAN OPERATE SAFELY.

(II) WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. IF MIXED WITH WATER, USE 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

(III) LIQUID BINDERS MAY BE USED AND APPLIED HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF SLOPES. THE REMAINDER OF THE AREA SHOULD APPEAR UNIFORM AFTER BINDER APPLICATION. BINDERS LISTED IN THE 1994 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL OR APPROVED EQUAL SHALL BE APPLIED AT RATES RE RECOMMENDED BY THE MANUFACTURERS.

(IV) LIGHTWEIGHT PLASTIC NETTING MAY BE USED TO SECURE MULCH. THE NETTING WILL BE STAPLED TO THE GROUND ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

2. TEMPORARY SEEDING:

LIME:	100 POUNDS OF DOLOMITIC LIMESTONE PER 1,000 SQUARE FEET.
FERTILIZER:	15 POUNDS OF 10-10-10 PER 1,000 SQUARE FEET.
SEED:	PERENNIAL RYE - 0.92 POUNDS PER 1,000 SQUARE FEET (FEBRUARY 1 THROUGH APRIL 30 OR AUGUST 15 THROUGH NOVEMBER 1). MILLET - 0.92 POUNDS PER 1,000 SQUARE FEET (MAY 1 THROUGH AUGUST 15).
MULCH:	SAME AS 1 D AND E ABOVE.

3. NO FILLS MAY BE PLACED ON FROZEN GROUND. ALL FILL TO BE PLACED IN APPROXIMATELY HORIZONTAL LAYERS, EACH LAYER HAVING A LOOSE THICKNESS OF NOT MORE THAN 8 INCHES. ALL FILL IN ROADWAYS AND PARKING AREAS IS TO BE CLASSIFIED TYPE 2 AND COMPACTED TO 90% DENSITY; COMPACTION TO BE DETERMINED BY ASTM D-1557-66T (MODIFIED PROCTOR). ANY FILL WITHIN THE BUILDING AREA IS TO BE COMPACTED TO A MINIMUM OF 95% AS DETERMINED BY METHODS PREVIOUSLY MENTIONED. FILLS FOR POND EMBANKMENTS SHALL BE COMPACTED AS PER MD-378 CONSTRUCTION SPECIFICATIONS. ALL OTHER FILLS SHALL BE COMPACTED SUFFICIENTLY SO AS TO BE STABLE AND PREVENT EROSION AND SLIPPAGE.

4. PERMANENT SOD:

INSTALLATION OF SOD SHOULD FOLLOW PERMANENT SEEDING DATES. PERMANENT SOD IS TO BE TALL FESCUE, STATE APPROVED SOD; LIME AND FERTILIZER PER PERMANENT SEEDING SPECIFICATIONS AND LIGHTLY IRRIGATE SOIL PRIOR TO LAYING SOD. SOD IS TO BE LAID ON THE CONTOUR WITH ALL ENDS TIGHTLY ABUTTING. JOINTS ARE TO BE STAGGERED BETWEEN ROWS. WATER AND ROLL OR TAMP SOD TO INSURE POSITIVE ROOT CONTACT WITH THE SOIL.. ALL SLOPES STEEPER THAN 3:1, AS SHOWN, ARE TO BE PERMANENTLY SODDED OR PROTECTED WITH AN APPROVED EROSION CONTROL NETTING. ADDITIONAL WATERING FOR ESTABLISHMENT MAY BE REQUIRED. SOD IS NOT TO BE APPLIED ON FROZEN GROUND. SOD SHALL NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (DRY OR WET) AND/OR EXTREME TEMPERATURE MAY ADVERSELY AFFECT ITS SURVIVAL. IN THE ABSENCE OF ADEQUATE RAINFALL, IRRIGATION SHOULD BE PERFORMED TO INSURE ESTABLISHED SOD.

5. TOPSOIL

I. TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.

II TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:

i. TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, AND LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.

ii. TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.

iii. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

III. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:

i. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I VEGETATIVE STABILIZATION METHODS AND MATERIALS.

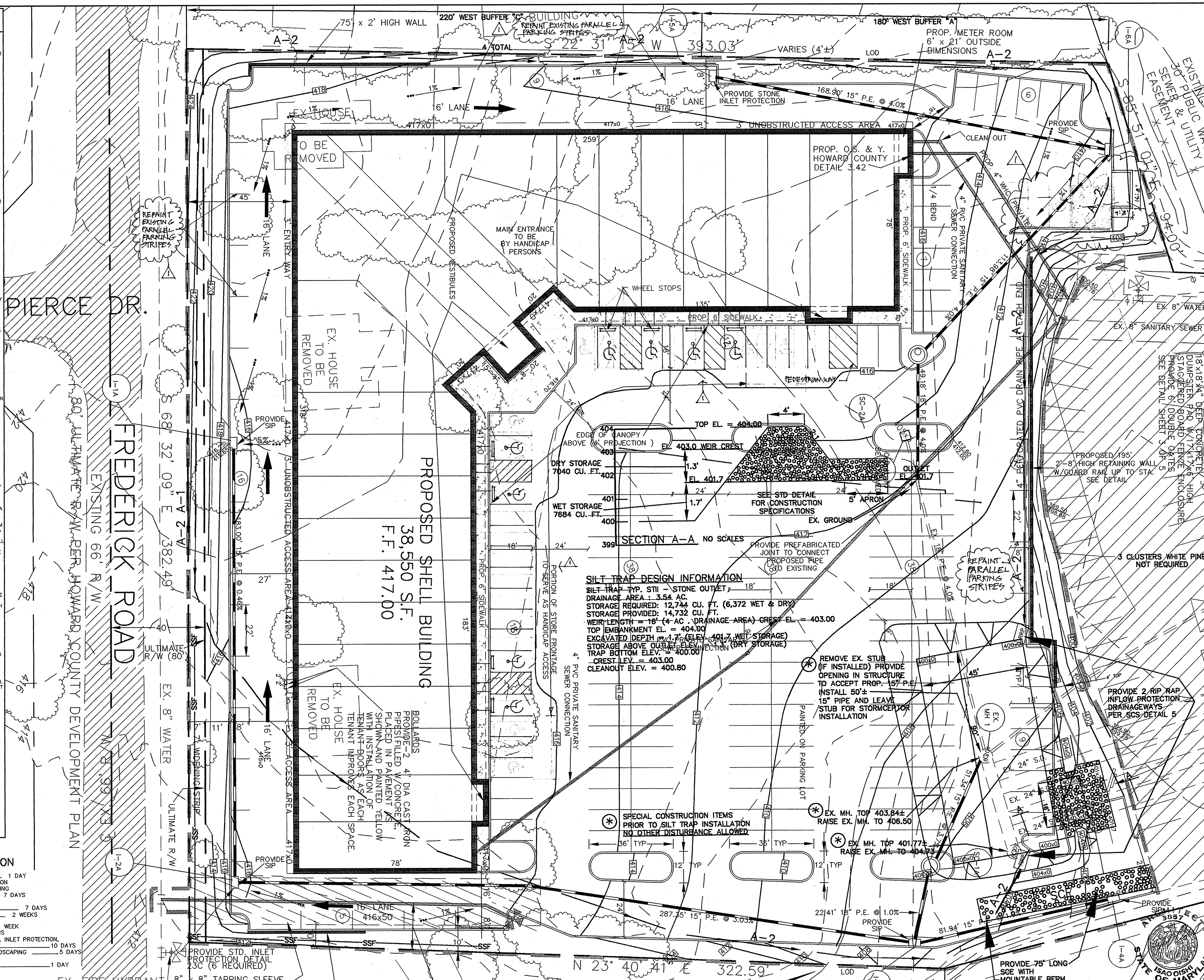
NOTE: USE OF THIS INFORMATION DOES NOT PRECLUDE MEETING ALL OF THE REQUIREMENTS OF THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL".

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT. ____ 1 DAY
2. INSTALL SPECIAL PRE-CONSTRUCTION ITEMS (INDICATED * ON THIS PAGE) 15" S.D. PIPE AND RAISE MANHOLES ON EXISTING STORMWATER MANAGEMENT STRUCTURE ____ 7 DAYS
3. INSTALL TEMPORARY SEDIMENT CONTROLS, SCE, SILT TRAP, EARTH DIKES, AND SILT TRAP ____ 7 DAYS
4. ROUGH GRADING TO APPROXIMATE FINAL GRADES ____ 2 WEEKS
5. CONSTRUCTION OF STORM DRAIN SYSTEM AND OTHER UTILITIES. ____ 1 WEEK
6. CONSTRUCTION OF BUILDINGS ____ 4 MONTHS
7. FINAL GRADING, REMOVAL OF SILT TRAP, PERIMETER DIKES, INLET PROTECTION, INSTALLATION OF WALKS, CURB & GUTTER, AND PAVEMENT. ____ 10 DAYS
8. FINAL VEGETATIVE STABILIZATION AND PLACEMENT OF LANDSCAPING ____ 5 DAYS
9. REMOVAL OF TEMPORARY SEDIMENT CONTROL MEASURES WITH INSPECTOR'S APPROVAL. ____ 1 DAY

GENERAL NOTES

1. THE PREDOMINATE SOIL TYPES ARE MIB2 & CuB
2. FIELD RUN TOPOGRAPHIC SURVEY CONDUCTED ON JUNE 1997 BY DESIGN TECH.
3. ALL SPOIL SHALL BE HAULED TO AN APPROVED SPOIL SITE WITH APPROVED SEDIMENT CONTROL MEASURES.
4. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" 48 HOURS PRIOR TO INITIATING CONSTRUCTION.
5. THE PROPOSED WORK IS NOT LOCATED WITHIN THE 100-YR. FLOOD PLAIN.



LEGEND

EXISTING ELEVATION	102.45
PROPOSED ELEVATION	102x45
EXISTING CONTOUR	—102—
PROPOSED CONTOUR	— 102 —
SILT FENCE	—SF——SF—
LIMITS OF DISTURBANCE	• •
EXISTING TREE	HOLLY_18"
EXISTING TREE (TO BE REMOVED)	
STABILIZED CONSTRUCTION ENTRANCE	SCE

BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AND "AS - BUILT" PLAN OF THE PROJECT WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Michael Stavlas 4/5/99
DEVELOPER DATE

BY THE ENGINEER:

I CERTIFY THAT THIS PLAN FOR ~~POND CONSTRUCTION,~~ EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. ~~I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS - BUILT" PLAN OF THE PROJECT WITHIN 30 DAYS OF COMPLETION.~~

Michael Helfrich 4/5/99
ENGINEER DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

Mary Sue Baker per [illegible] 5/7/99
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

[illegible signature] 5/10/99
DIRECTOR DATE

[illegible signature] 5/7/99
CHIEF, DIVISION LAND DEVELOPMENT DATE

[illegible signature] 4/28/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DATE	NO.	REVISION
5/25/16	1	REVISE PARKING CONFIGURATION

OWNER / DEVELOPER
MICHAEL STAVLAS
1726 DORSEY ROAD
HANOVER, MD. 21076

PROJECT S.D.P. 99-56
STAVLAS - ROUTE 40 STAVLAS BUSINESS CENTER
PHASE II

AREA TAX MAP 24 PARCEL 68
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE **EROSION & SEDIMENT CONTROL PLAN**

GAMMA ENGINEERING
844 WEST STREET
ANNAPOLIS, MD 21401
(410) 626-1070

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
Cheryl Simmons 4/26/99
USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

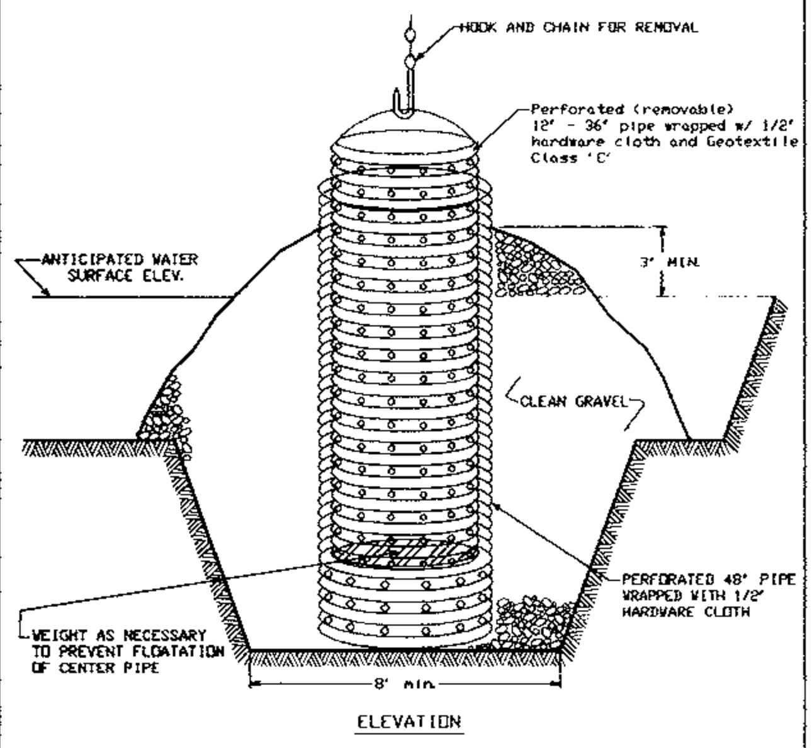
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
John R. Robertson 4/26/99
HOWARD SCD DATE

3/21/99
DATE
STATE OF MARYLAND MICHAEL H. HELFRICH NO. 15542 REGISTERED PROFESSIONAL ENGINEER
MICHAEL H. HELFRICH

DESIGNED BY: MHH
DRAWN BY: APF
PROJECT NO. SDP 99-56
DATE: MAR 1999
SCALE: 1" = 20'
DRAWING NO. 4 OF 5

SDP-99-56

DETAIL 20A - REMOVABLE PUMPING STATION

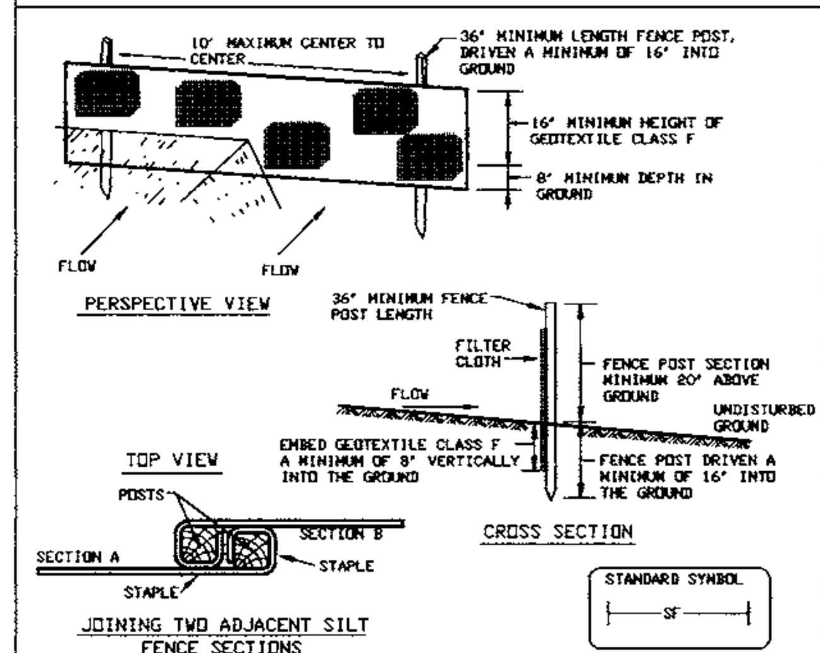


Construction Specifications

1. The outer pipe should be 48" dia. or shall, in any case, be at least 4" greater in diameter than the center pipe. The outer pipe shall be wrapped with 1/2" hardware cloth to prevent backfill material from entering the perforations.
2. After installing the outer pipe, backfill around outer pipe with 2" aggregate or clean gravel.
3. The inside stand pipe (center pipe) should be constructed by perforating a corrugated or PVC pipe between 12" and 36" in diameter. The perforations shall be 1/2" X 6" slits or 1" diameter holes 6" on center. The center pipe shall be wrapped with 1/2" hardware cloth first, then wrapped again with Geotextile Class C.
4. The center pipe should extend 12" to 18" above the anticipated water surface elevation or riser crest elevation when dewatering a basin.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE D - 12 - 4	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 22 - SILT FENCE



Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.

2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

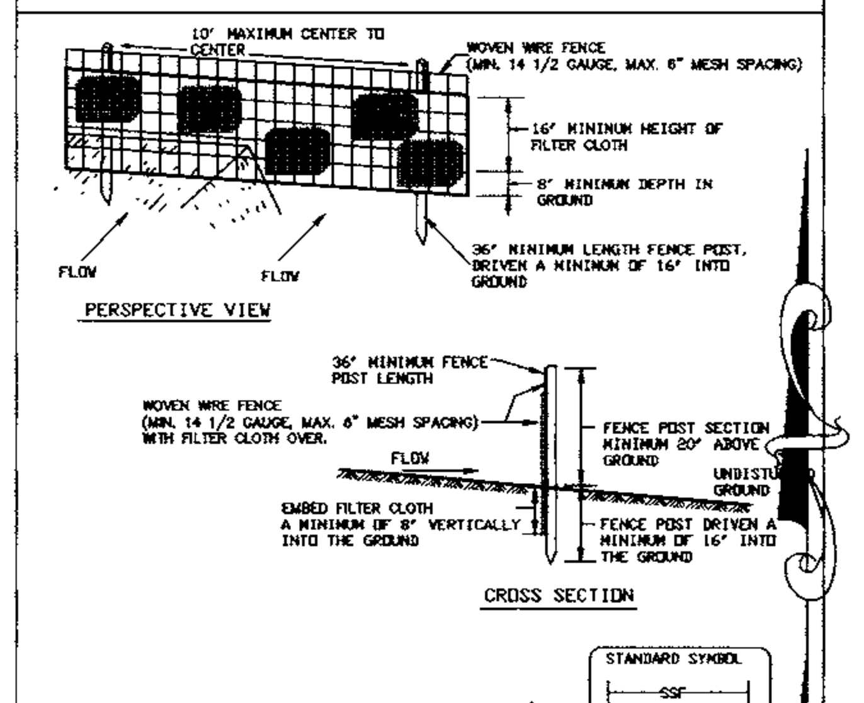
Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft²/ minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 15 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SUPER SILT FENCE



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. Woven wire fence to be fastened securely to fence posts with wire ties or staples.
2. Filter cloth to be fastened securely to woven wire fence with ties spaced every 24" at top and mid section.
3. When two sections of filter cloth adjoin each other they shall be over-lapped by 6" and folded.
4. Maintenance shall be performed as needed and material removed when "bulges" develop in the silt fence.

POSTS: Steel either T or U type or 2" hardwood.

FENCE: Woven wire, 14 1/2 gauge, 6" max. mesh opening.

FILTER CLOTH: Filter X, Mirafo 100X, Stabilinka T140N, or approved equal

PREFABRICATED UNIT: Geofab, Envirofence, or approved equal

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MD.	SUPER SILT FENCE	STANDARD DRAWING SF-1

Concrete Stormceptor Order Request Form* SC1A

Official Use Only
Order # ____
Date ____
Internal Sale ____

Contractor Information
Name
Address
City
State
Zip Code
Contact
Phone
Fax

You can specify the angle of the discharge pipe coming out of the Stormceptor.

Inlet pipe 15" p.v.c @ 170°
Outlet pipe 15" p.v.c @ 334°
90° 180° 0° 270°

Owner Information
Name: LIVADE INC.
Phone: 410-768-0463
Fax

Please draw orientation of inlet and outlet pipes on drawing along with pipe inside diameter (in.) and invert elevation (ft.). Clearly mark inlet pipes with an I and outlet pipes with an O and provide the inlet/outlet pipe angle in degrees.

Stormceptor Model		Insert Size		Data	
900 ___	3600 ___	22" ___		Manhole/Structure Number	SC1A
1200 ___	4800 ___	32" ___		Top Elevation (ft)	407.19
1800 X	6000 ___	44" ___		Inlet Pipe Invert (ft)	395.83
2400 ___	7200 ___	Disc X		Outlet Pipe Invert (ft)	395.75
		Custom ___		Pipe Type	P.E.
				Pipe Inside Diameter (in) [ID]	15"

Impervious Drainage Area (ac): ___ PSQpe Outside Diameter (in) [OD] ___

Project Name: STAVLAS DINER
Approximate time frame until required delivery (weeks): 3 WEEKS
Exact Delivery Address: Street: ROUTE 40 @ CENTENNIAL LANE
City: ELLICOTT CITY State: MD Zip Code: 21043

Designer Company: GAMMA ENGINEERING
Designer Contact: MICHAEL HELFRICH Phone (410) 626-1070 Fax (410) 267-8619

Please fax this sheet to Stormceptor Corporation at (301) 762-4190

For Technical Information Please Call Stormceptor Corporation at (301) 762-8361 or Toll Free at 1-800-762-4703

*Form to be included on plan by Designer 4/22/98

Concrete Stormceptor Order Request Form* SC2A

Official Use Only
Order # ____
Date ____
Internal Sale ____

Contractor Information
Name
Address
City
State
Zip Code
Contact
Phone
Fax

You can specify the angle of the discharge pipe coming out of the Stormceptor.

Outlet pipe 15" p.v.c @ 180°
Inlet pipe 18" p.v.c @ 315°
90° 180° 0° 270°

Owner Information
Name: LIVADE INC.
Phone: 410-768-0463
Fax

Please draw orientation of inlet and outlet pipes on drawing along with pipe inside diameter (in.) and invert elevation (ft.). Clearly mark inlet pipes with an I and outlet pipes with an O and provide the inlet/outlet pipe angle in degrees.

Stormceptor Model		Insert Size		Data	
900 ___	3600 ___	22" ___		Manhole/Structure Number	SC2A
1200 X	4800 ___	32" ___		Top Elevation (ft)	416.00
1800 ___	6000 ___	44" ___		Inlet Pipe Invert (ft)	401.78
2400 ___	7200 ___	Disc X		Outlet Pipe Invert (ft)	401.68
		Custom ___		Pipe Type	P.E.
				Pipe Inside Diameter (in) [ID]	15" & 18"

Impervious Drainage Area (ac): 1.08 Pipe Outside Diameter (in) [OD] ___

Project Name: STAVLAS DINER
Approximate time frame until required delivery (weeks): 3 WEEKS
Exact Delivery Address: Street: ROUTE 40 @ CENTENNIAL LANE
City: ELLICOTT CITY State: MD Zip Code: 21043

Designer Company: GAMMA ENGINEERING
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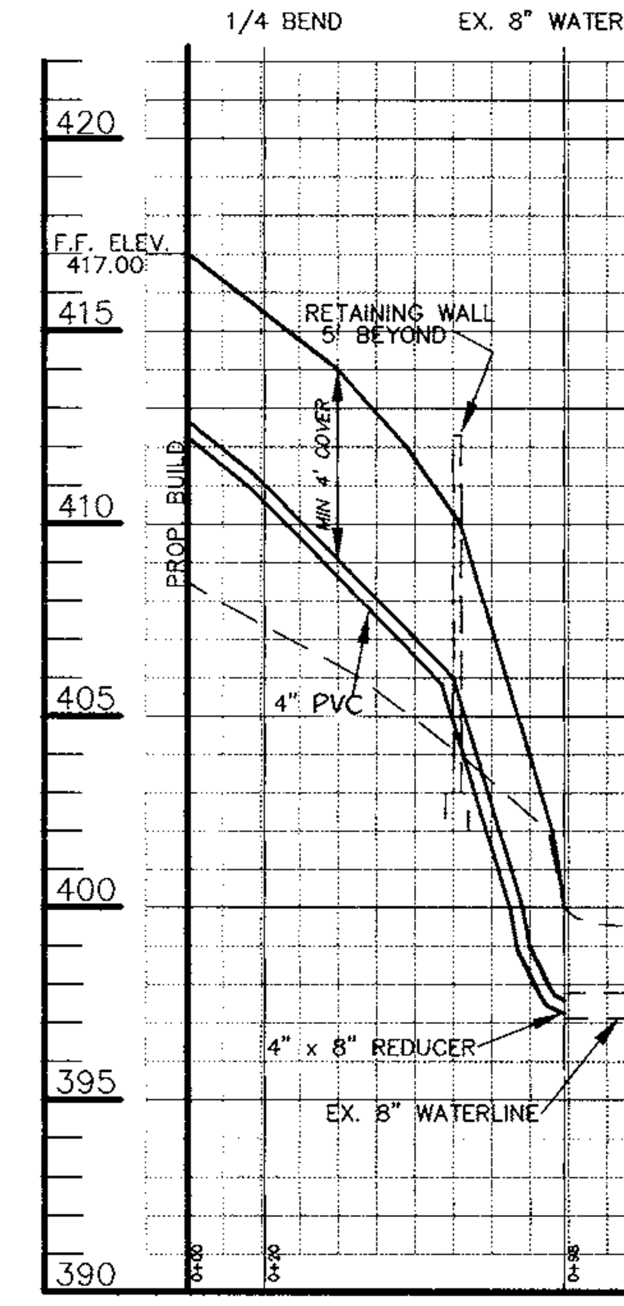
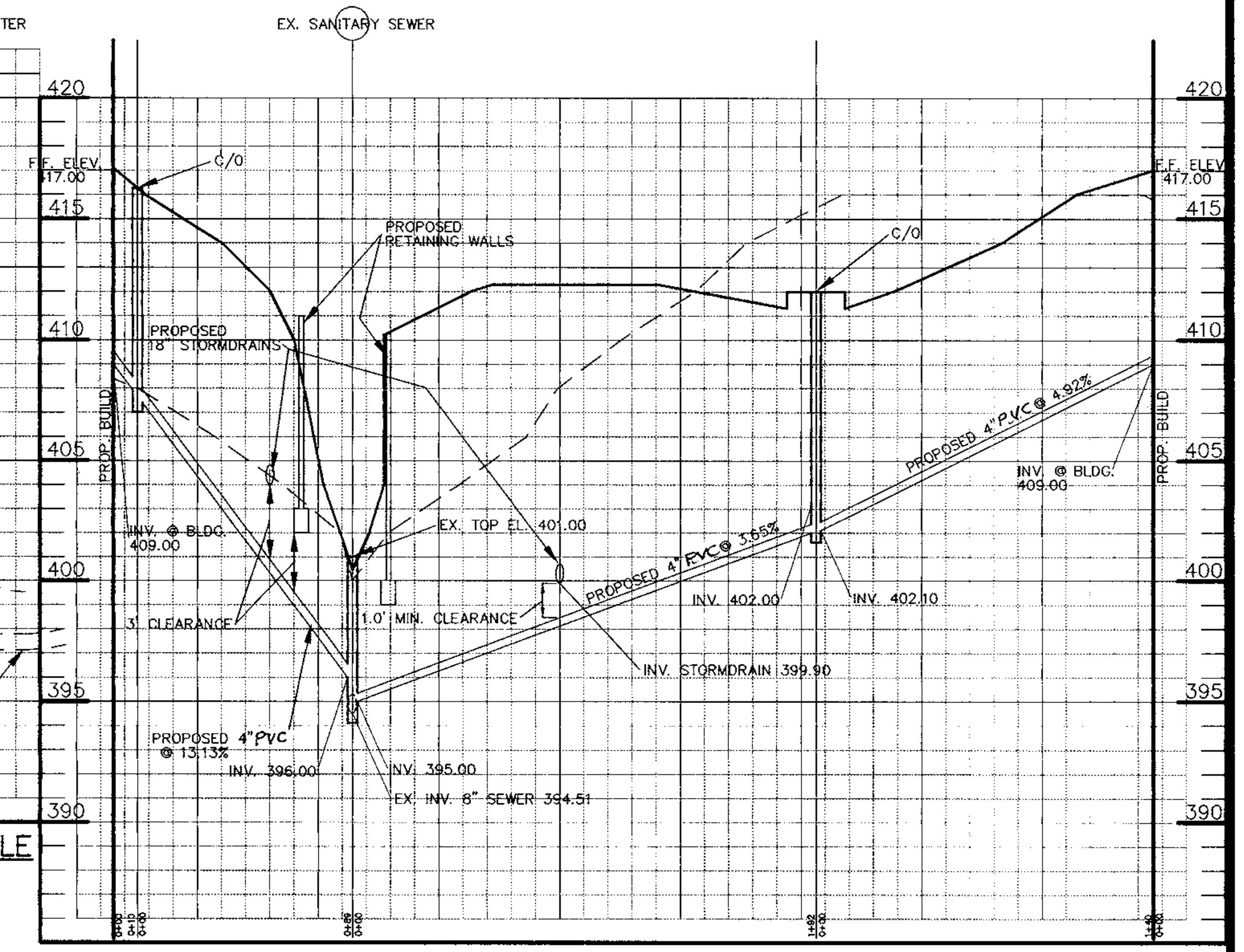
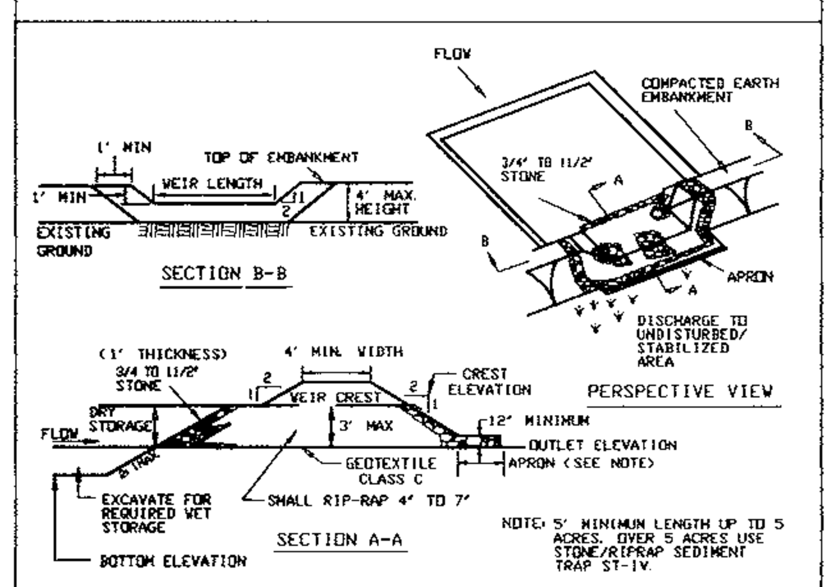


PRIVATE WATER PROFILE
SCALE: HOR: 1" = 50'
VER: 1" = 5'



PRIVATE SEWER PROFILE
SCALE: HOR: 1" = 50'
VER: 1" = 5'

DETAIL 9 - STONE OUTLET SEDIMENT TRAP - ST II



Construction Specifications

1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.

2. The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.

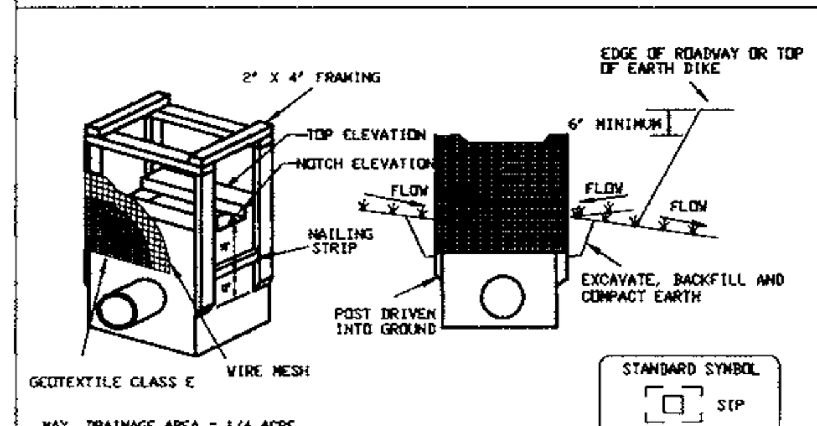
3. All cut and fill slopes shall be 2:1 or flatter.

4. The stone used in the outlet shall be small rip-rap 4" to 7" in size with a 1' thick layer of 3/4" to 11/2" washed aggregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent clogging. Geotextile Class C may be substituted for the stone facing by placing it on the inside face of the stone outlet.

5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE C - 9 - 18	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 23A - STANDARD INLET PROTECTION



MAX. DRAINAGE AREA = 1/4 ACRE

Construction Specifications

1. Excavate completely around the inlet to a depth of 18" below the notch elevation.

2. Drive the 2" x 4" construction grade lumber posts 1' into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail 23A. The top of the frame (weir) must be 6" below adjacent roadways where flooding and safety issues may arise.

3. Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.

4. Stretch the Geotextile Class E tightly over the wire mesh with the geotixtile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.

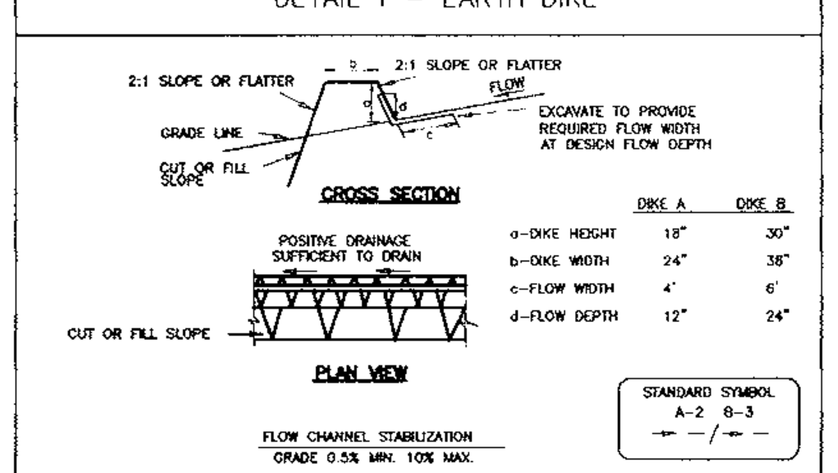
5. Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sides.

6. If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.

7. The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 16 - 5	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 1 - EARTH DIKE



	DIKE A	DIKE B
a-DIKE HEIGHT	18"	30"
b-DIKE WIDTH	24"	36"
c-FLOW WIDTH	4'	6'
d-FLOW DEPTH	12"	24"

STANDARD SYMBOL
A-2 B-3

FLOW CHANNEL STABILIZATION
GRADE 0.5% MIN. 10% MAX.

1. Seed and cover with straw mulch.
2. Seed and cover with Erosion Control Matting or line with sod
3. 4" - 7" stone or recycled concrete equivalent pressed into the soil 7" minimum

Construction Specifications

1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.

2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.

3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.

4. All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.

5. The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.

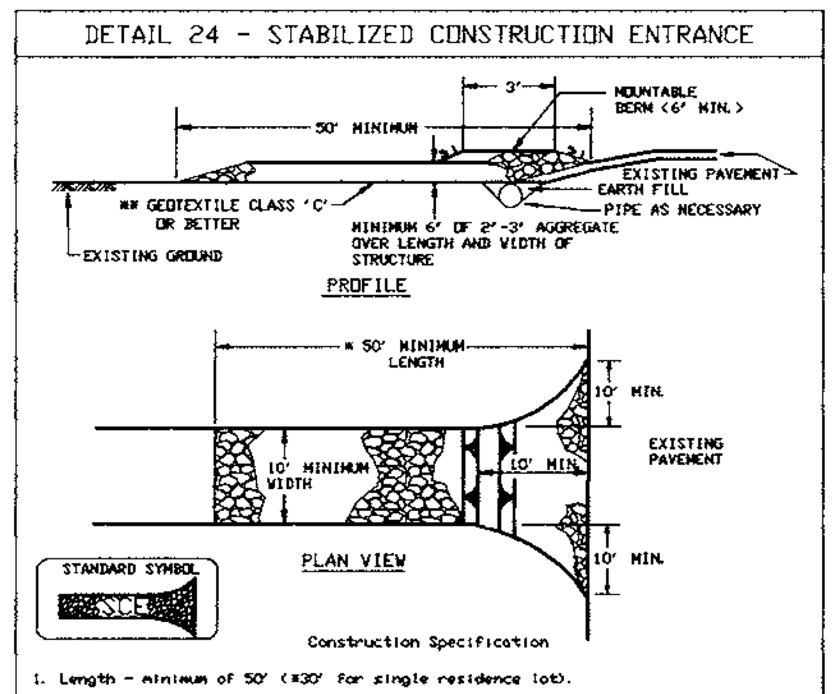
6. Fill shall be compacted by earth moving equipment.

7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.

8. Inspection and maintenance must be provided periodically and after each rain event.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE A - 1 - 6	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



Construction Specification

1. Length - minimum of 50' (*30' for single residence lot).

2. Width - 10' minimum, should be flared at the existing road to provide a turning radius.

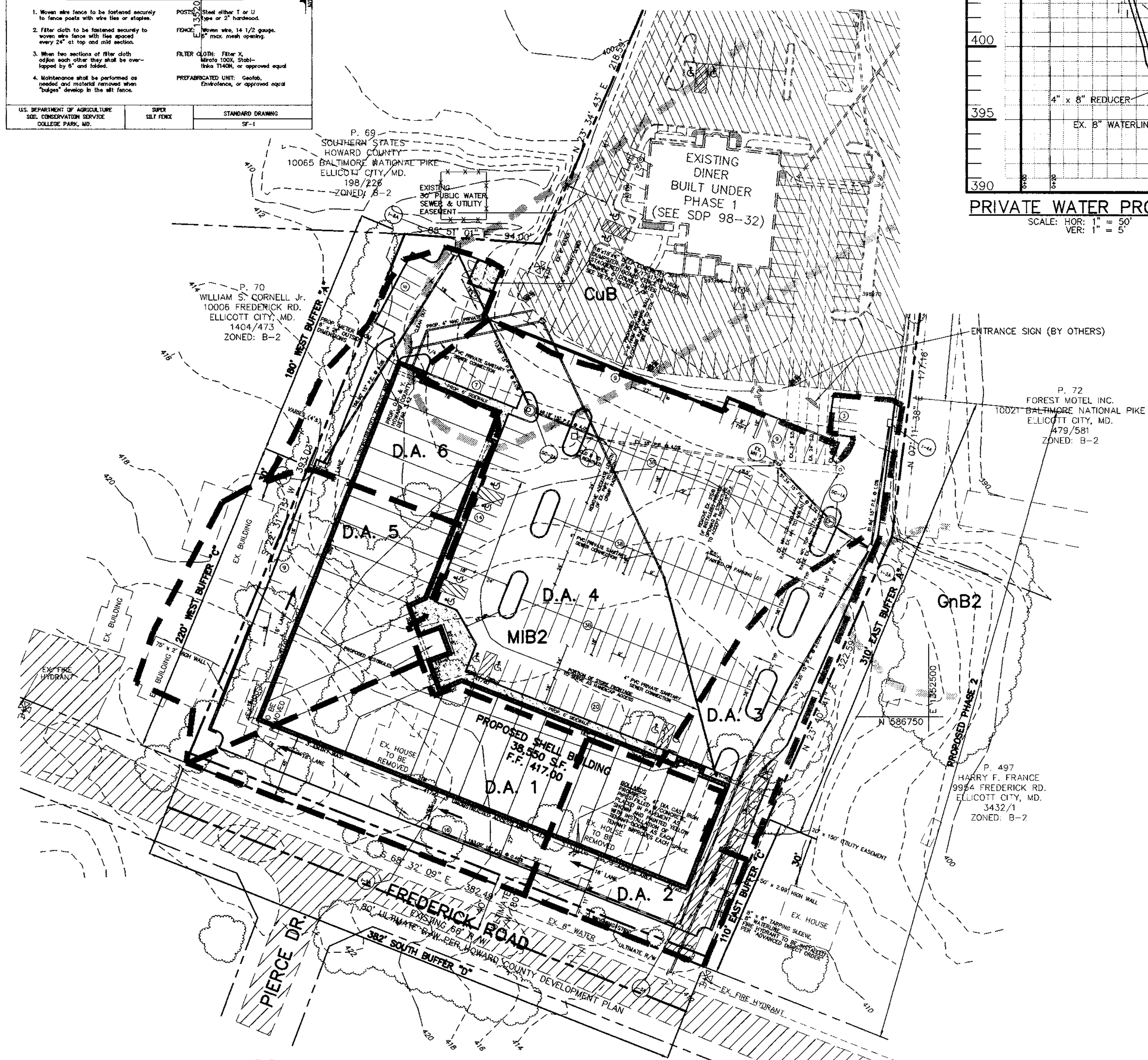
3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.

4. Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.

5. Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.

6. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 17 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



AREA AND "C" FACTOR TABULATION

DRAINAGE AREA/ INLET NO.	AREA (ac) (A)	"C" FACTOR (C)	% IMPERVIOUS (P)
1 / 1A	0.50	0.80	80
2 / 2A	0.30	0.80	79
3 / 3A	0.27	0.85	85
4 / 4A	1.06	0.93	96
5 / 5A	0.56	0.71	67
6 / 6A	0.35	0.79	82
TOTAL	3.04		

SOILS LIST

SOILS MAP NO.15

ABBREVIATION		SCD. SOILS TYPE
MIC2	MANOR LOAM, 8 - 15% SLOPES, MOD. ERODED	B
CuB	COMUS SILT LOAM, LOCAL ALLUVIUM, 3 - 8% SLOPES	B
GnB2	GLENVILLE SILT LOAM, 3 - 8% SLOPES, MOD ERODED	B
MIB2	MANOR LOAM, 3 - 8% SLOPES, MOD. ERODED	B

SOILS WHICH MAY CONTAIN HYDRIC INCLUSIONS.

NOTE: CuB, NORMALLY WELL DRAINED, BUT COMUS SOILS MAY CONTAIN HYDRIC INCLUSIONS WHERE IT IS SUBJECT TO FREQUENT FLOODING.

NOTE: THERE IS NO 100 YEAR FLOODPLAIN NOR NON-TIDAL WETLANDS ON THE SITE.

STANDARD SEDIMENT CONTROL NOTES

I (WE) CERTIFY THAT:

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (410-313-1855).
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1, b) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7 OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SOD, TEMPORARY SEEDING, AND MULCHING (SEC. G). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. SITE ANALYSIS:

TOTAL AREA OF SITE	=	5.006 ACRES
PHASE 2 AREA DISTURBED (TOTAL)	=	3.42 ACRES
PHASE 2 AREA TO BE ROOFED OR PAVED	=	3.03 ACRES
PHASE 2 AREA TO BE VEGETATIVELY STABILIZED	=	0.39 ACRES
PHASE 2 TOTAL CUT	=	11,500 CU.YDS.
PHASE 2 TOTAL FILL	=	11,500 CU.YDS.
PHASE 2 OFFSITE WASTE/BORROW AREA LOCATION	=	0 CU.YDS.

8. ANY SEDIMENT CONTROL PRACTICE WHICH DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
12. ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE IN ACCORDANCE WITH THIS SEDIMENT AND EROSION CONTROL PLAN, AND FURTHER, AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY THE HOWARD COUNTY INSPECTION STAFF OR THEIR AUTHORIZED AGENTS.
13. ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE FROM THE MARYLAND DEPARTMENT OF THE ENVIRONMENT'S APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. RESPONSIBLE PERSON ON SITE: MICHAEL H. HELFRICH
14. THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS, RIGHT-OF-WAY(S) THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL PRACTICES, STORMWATER MANAGEMENT PRACTICES, AND THE DISCHARGE OF STORMWATER ONTO OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES INCLUDED IN THIS PLAN. HE IS ALSO RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS, AND/OR RIGHT-OF-WAY(S) THAT MAY BE REQUIRED FOR GRADING AND/OR WORK ON ADJACENT PROPERTIES INCLUDED IN THIS PLAN.
15. THE SEDIMENT CONTROL APPROVALS ON THIS PLAN EXTEND ONLY TO AREAS AND PRACTICES IDENTIFIED AS PROPOSED WORK.
16. THE APPROVAL OF THIS PLAN FOR SEDIMENT AND EROSION CONTROL DOES NOT RELIEVE THE DEVELOPER/CONSULTANT FROM COMPLYING WITH ANY FEDERAL/STATE COUNTY REQUIREMENTS APPURTENANT TO ENVIRONMENTAL ISSUES.

VEGETATIVE ANALYSIS

AREAS INCLUDE A COMBINATION OF:

1. WILD BLACK CHERRY
2. RED MAPLE & SILVER MAPLE
3. BLACK LOCUST, GOLDEN ROD
4. BOXELDER, ASPEN
5. SMOOTH SUMAC, SASSAFRAS
6. MULTIFLORA ROSE
7. JAPANESE HONEYSUCKLE
8. RED MULBERRY, GRASSES
9. WHITE CEDER

-ALL OTHER AREAS ARE EITHER MOWED LAWN OR BARE GROUND/GRAVEL.

AS BUILT CERTIFICATE

MICHAEL H. HELFRICH DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

Mary Sue Baker per [signature] 5/7/99
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

[signature] 5/10/99
DIRECTOR DATE

Richard Blood 5/7/99
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[signature] 4/28/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DATE	NO.	REVISION

OWNER / DEVELOPER
MICHAEL STAVLAS
1726 DORSEY ROAD
HANOVER, MD. 21076

PROJECT S.D.P. 99-56
STAVLAS - ROUTE 40 STAVLAS BUSINESS CENTER PHASEII

AREA TAX MAP 24 PARCEL 68
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE SOILS, ENVIRONMENTAL ANALYSIS, SEDIMENT CONTROL NOTES AND DETAILS

GAMMA ENGINEERING
844 WEST STREET
ANNAPOLIS, MD 21401
(410) 626-1070

3/21/99
DATE
STATE OF MARYLAND MICHAEL H. HELFRICH NO. 15542 REGISTERED PROFESSIONAL ENGINEER
MICHAEL H. HELFRICH

DESIGNED BY: MHH
DRAWN BY: APF
PROJECT NO. SDP 99-56
DATE: MAR 1999
SCALE: 1" = 50'
DRAWING NO. 5 OF 5

SDP-99-56

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